



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

22801 7590 05/19/2008  
LEE & HAYES PLLC  
421 W RIVERSIDE AVENUE SUITE 500  
SPOKANE, WA 99201

EXAMINER

CHEN, QING

ART UNIT

PAPER NUMBER

2191

DATE MAILED: 05/19/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,320	10/23/2003	Krzysztof J. Cwalina	MS1-1748US	8610
TITLE OF INVENTION: DESIGN OF APPLICATION PROGRAMMING INTERFACES (APIS)				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/19/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
 or Fax **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

22801 7590 05/19/2008

LEE & HAYES PLLC  
 421 W RIVERSIDE AVENUE SUITE 500  
 SPOKANE, WA 99201

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,320	10/23/2003	Krzysztof J. Cwalina	MS1-1748US	8610
TITLE OF INVENTION: DESIGN OF APPLICATION PROGRAMMING INTERFACES (APIS)				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/19/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHEN, QING	2191	717-126000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2  
 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,320	10/23/2003	Krzysztof J. Cwalina	MSI-1748US	8610
22801	7590	05/19/2008	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			CHEN, QING	
			ART UNIT	PAPER NUMBER

2191

DATE MAILED: 05/19/2008

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 774 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 774 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

## Application No.

10/692,320

## Examiner

Qing Chen

## Applicant(s)

CWALINA ET AL.

## Art Unit

2191

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on February 19, 2008.
2. ☒ The allowed claim(s) is/are 1-4, 6, 10-19, 22-28, 32-36, 38-49 and 51-59, renumbered as 1-48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

1. This Office action is in response to the amendment filed on February 19, 2008.
2. **Claims 1-4, 6, 10-19, 22-28, 32-36, 38-49, and 51-59** are pending.
3. **Claims 1-3, 15, 22, 34, 36, 38, 39, and 47-49** have been amended.
4. **Claims 5, 7-9, 20, 21, 29-31, 37, and 50** have been cancelled.
5. **Claims 1-4, 6, 10-19, 22-28, 32-36, 38-49, and 51-59** are allowed, renumbered as 1-48.
6. The objection to the specification is withdrawn in view of Applicant's amendments to the specification.
7. The 35 U.S.C. § 112, second paragraph, rejections of Claims 29-31 and 48 are withdrawn in view of Applicant's amendments to the claims.

***Examiner's Amendment***

8. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with David K. Sakata (Reg. No. 59,949) on May 7, 2008.

The application has been amended as follows:

**In the Claims:**

Please cancel Claims 29-31 and amend Claims 1, 6, 15, 34, 36, and 47-49 as follows:

1. (Currently Amended) A method for designing an ~~application programming interface~~  
Application Programming Interface (API), the method comprising:

preparing a plurality of code samples for a core scenario, each respective code sample of the plurality of code samples corresponding to a respective programming language of a plurality of programming languages;

deriving the API from the core scenario responsive to the plurality of code samples,  
wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control;

performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the API without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API; and

realizing the API in one or more processor-accessible storage media.

6. (Currently Amended) The method as recited in claim [[5]] 1, wherein the performing comprises:

performing the one or more usability studies on the API utilizing the plurality of developers wherein the plurality of developers are competent with the plurality of programming languages.

15. (Currently Amended) A method for designing an ~~application programming interface~~ Application Programming Interface (API), the method comprising:

selecting a core scenario for a feature area;

writing at least one code sample for the core scenario;

deriving an API for the core scenario responsive to the at least one code sample, wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to

Art Unit: 2191

developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control;

performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the API without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API; and

realizing the API in one or more processor-accessible storage media.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

34. (Currently Amended) A method for designing an ~~application programming interface~~  
Application Programming Interface (API), the method comprising:



deriving an API for a scenario responsive to at least one code sample written with regard to the scenario, wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control;

performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the API without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API; and

realizing the API in one or more processor-accessible storage media.

36. (Currently Amended) The method as recited in claim 34, further comprising, prior to the performing one or more usability studies on the API:

determining, by the API designer, if the ~~derived~~ API is more complex than desired;  
if the ~~derived~~ API is determined to be more complex than desired, then  
refining, by the API designer, the ~~derived~~ API to produce a refined API; and  
determining, by the API designer, if the refined API is more complex than  
desired.

47. (Currently Amended) A method for designing an ~~application programming interface~~  
Application Programming Interface (API), the method comprising:

preparing a plurality of code samples for a core scenario, each respective code sample of  
the plurality of code samples corresponding to a respective programming language of a plurality  
of programming languages;

deriving the API for the core scenario responsive to the plurality of code samples,  
wherein the deriving comprises producing a two-layer framework that includes component types  
targeting a relatively higher level of abstraction and component types targeting a relatively lower  
level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than  
the relatively higher level of abstraction; wherein the component types targeting the relatively  
higher level of abstraction are directed to core scenarios; and wherein the component types  
targeting the relatively lower level of abstraction provide a relatively greater amount of control to  
developers as compared to the component types targeting the relatively higher level of  
abstraction, which provide a relatively lower amount of control to the component types, wherein  
the relatively lower amount of control is a lower amount of control than the relatively greater  
amount of control;

performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the API without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API; and

realizing the API in one or more processor-accessible storage media.

48. (Currently Amended) A method for designing an ~~application programming interface~~ Application Programming Interface (API), the method comprising:

writing at least one code sample for a scenario;

deriving an API for the scenario responsive to the at least one code sample, the API including (i) an aggregate component that is adapted to facilitate implementation of the scenario and (ii) a plurality of factored types that provide underlying functionality for the aggregate component, the API enabling a progression from using the aggregate component in simpler situations to using an increasing portion of the plurality of factored types in increasingly complex situations, wherein the simpler situations are less complex than the increasingly complex situations; wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types

targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control;

performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the API without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API; and

realizing the API in one or more processor-accessible storage media.

49. (Currently Amended) A method for designing an ~~application programming interface~~ Application Programming Interface (API), the method comprising:

deriving at least one aggregate component to support at least one code sample for at least one scenario, wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types

targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control;

determining additional requirements with respect to the at least one scenario;

deciding if the additional requirements can be added to the at least one aggregate component without adding more complexity than desired to the at least one scenario;

if it is decided that the additional requirements can not be added to the at least one aggregate component without adding more complexity than desired to the at least one scenario, then:

defining a plurality of factored types responsive to the deciding;

performing one or more usability studies on the ~~refined~~ at least one aggregate component utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the ~~refined~~ at least one aggregate component without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the ~~refined~~ at least one aggregate component without problems, then revising, by the API designer, the ~~refined~~ at least one aggregate component based on the one or more usability studies to produce a revised aggregate component; and

realizing the at least one aggregate component in one or more processor-accessible storage media; and

realizing the plurality of factored types in the one or more processor-accessible storage media; and

if it is decided that the additional requirements can be added to the at least one aggregate component without adding more complexity than desired to the at least one scenario, then:

refining the at least one aggregate component to incorporate the additional requirements;

performing one or more usability studies on the refined at least one aggregate component utilizing a plurality of developers, wherein the one or more usability studies comprise:

determining, by an API designer, whether the plurality of developers are able to use the refined at least one aggregate component without problems; and

when the plurality of developers are ~~not~~ determined not to be able to use the refined at least one aggregate component without problems, then revising, by the API designer, the refined at least one aggregate component based on the one or more usability studies to produce a revised aggregate component; and

realizing the refined at least one aggregate component in the one or more processor-accessible storage media.

-- END OF AMENDMENT --

***Reasons for Allowance***

9. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control; performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise: determining, by an API designer, whether the plurality of developers are able to use the API without problems; and when the plurality of developers are not determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API" as recited in independent Claims 1, 15, 34, and 47-49.

The closest cited prior art, the combination of US 7,191,452 (hereinafter "Noden"), US 5,097,533 (hereinafter "Burger"), US 5,495,571 (hereinafter "Corrie"), and US 6,006,279 (hereinafter "Hayes"), teaches a engine for creating intermediate application programming interfaces by utilizing a target application's closed application programming interface through a

Art Unit: 2191

macro coded in a specially designed macro language. However, the combination of Noden, Burger, Corrie, and Hayes fails to teach “wherein the deriving comprises producing a two-layer framework that includes component types targeting a relatively higher level of abstraction and component types targeting a relatively lower level of abstraction, wherein the relatively lower level of abstraction is lower in abstraction than the relatively higher level of abstraction; wherein the component types targeting the relatively higher level of abstraction are directed to core scenarios; and wherein the component types targeting the relatively lower level of abstraction provide a relatively greater amount of control to developers as compared to the component types targeting the relatively higher level of abstraction, which provide a relatively lower amount of control to the component types, wherein the relatively lower amount of control is a lower amount of control than the relatively greater amount of control; performing one or more usability studies on the API utilizing a plurality of developers, wherein the one or more usability studies comprise: determining, by an API designer, whether the plurality of developers are able to use the API without problems; and when the plurality of developers are not determined not to be able to use the API without problems, then revising, by the API designer, the API based on the one or more usability studies to produce a revised API” as recited in independent Claims 1, 15, 34, and 47-49.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”



***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/QC/  
May 8, 2008

/Wei Zhen/

Art Unit: 2191

Supervisory Patent Examiner, Art Unit 2191